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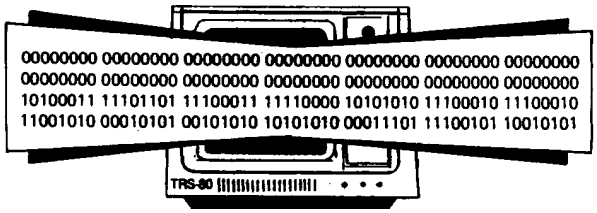
PROGRAM DOCUMENTATION

Designed for use on **TRS-80*** 16K Level II

Cassette Scope



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Cassette Scope

INTRODUCTION

This utility package consists of two separate programs. CASSAD is written in machine-language and will read a SYSTEM tape and display, on the screen, its file name and its load addresses. The TAPE DUMP program is written in BASIC and will "dump" a SYSTEM or BASIC tape (Level I BASIC, Level II BASIC or data) to the screen.

1. CASSAD.

CASSAD is a machine-language utility that will read a SYSTEM tape and display its filename, its load addresses (each continuous block of memory of a machine-language program, in 255 byte chunks or less, has its own load address) and the entry point of the program. (All addresses are displayed in hexidecimal format.) These three functions have a multitude of uses. For example, if you don't know the filename of a SYSTEM tape, you can't load it. Or, if you want to put your SYSTEM tape on disk, you need to know where it loads in memory and its entry point.

LOADING INSTRUCTIONS

There are three versions of Cassad on the tape, one version for each of the three memory sizes – 16K, 32K and 48K. Their respective filenames are CASS16, CASS32, and CASS48. Load the one that matches the memory size of your computer, as follows:

1. Answer the MEM SIZE? prompt by pressing (ENTER).
2. Type SYSTEM and press (ENTER).
3. Answer the *? prompt by typing the appropriate filename for your memory size. For example, if you have a 32K system, type CASS32 and press (ENTER). Press PLAY on your recorder.
4. When the program has loaded, the following message will be displayed:
   CASSAD COPYRIGHT (C) 1980 BY INSTANT SOFTWARE, INC.
   ALL RIGHTS RESERVED
   READY
   >

You now have a BASIC command called CASSAD. Anytime you want to find the filename or memory addresses of a SYSTEM tape, all you need to do is type CASSAD, put the tape into your tape recorder, press the PLAY button and press (ENTER). The computer will read your tape and display the information on the screen.

If the tape being examined is not a SYSTEM tape, or if a checksum occurs, then the appropriate error message will be displayed.

If you wish to put CASSAD on a disk, use the following procedure:

Using the TAPEDISK command, load the proper program for your memory configuration into the computer with TAPEDISK'S "C" command. Make sure you have pressed PLAY on the tape recorder. When the program has loaded, you'll need to type:

```
F CASS16/CMD:0 7E80 7FD2 402D
F CASS32/CMD:0 BE00 BF52 402D
F CASS48/CMD:0 FE00 FF52 402D
```

(Choose the one appropriate for your machine.)
Press (ENTER)
Type E to return to DOS.

To use the program, type CASS(N) where N is for your system, press (ENTER) then load disk-BASIC as follows: You are now in DOS, so type BASIC. Press (ENTER) for HOW MANY FILES? and then protect the following memory:

```
CASS16 - 32384 Entry point 32398
CASS32 - 48640 Entry point 48654
CASS48 - 65024 Entry point 65038
```

Press (ENTER) Next, type SYSTEM and press (ENTER). To the *? prompt, reply '/' (slash) Entry point (see above) and press (ENTER). The READY prompt will now appear to which you type CASSAD to call the program. To ensure that your load is a good one, type LIST100-210 and press (ENTER).

After the program is loaded, type RUN and press (ENTER). The screen will clear and the word BINARY? will appear. If you want the data displayed in binary form, type Y (yes) or, if not, type N (no) and press (ENTER). The program will now ask, ALPHANUMERIC? If you answered the first question Yes, then answer this one N0. If you answer both questions No, you'll get an alphanumeric display only. The computer now needs to know, LEVEL II? If you wish to read any 500 baud Level II tape, answer Yes. If you want to read a 250 baud Level I tape, answer No. The screen will clear and the program is now ready to read your tape.

Rewind the tape and press the PLAY button on your recorder. When the information on the tape is located, it will be "dumped" to the screen as it loads into memory. To freeze the display while the tape is being "dumped", simply stop the tape. To resume, press PLAY again. Press BREAK to return to the READY mode while the tape is being "dumped" or after it has been stopped. If you elected to have the information displayed in binary format, the screen will resemble figure 1.

When the screen is full, the next row of data will overwrite the data displayed at the top of the screen. The data will not be scrolled up as in a normal display.

If you elected to have the data displayed in alphanumeric format, the screen will display BASIC tapes in a combination of alphanumeric characters mixed with TRS-80 graphic characters. This is the result of a compression of the line numbers and commands when the tape was recorded Data tapes, however, are displayed in alphanumeric characters only. As with the binary format, when the screen is full, new data will overwrite the data already on the screen.

```
00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000
10100011 11101101 11100011 11110000 10101010 11100010 11100010
11001010 00010101 00101010 10101010 00011101 11100101 10010101
```

Figure 1.

2. TAPEDUMP

This BASIC program is loaded via the CLOAD command and will execute in any memory configuration, including disk-BASIC. This program is short and will load in about 30 seconds. NOTE: This program will NOT list on your screen like a normal BASIC program. In fact, if you execute a LIST command, the screen display will resemble that of a bad load. However, lines 100 through the end of the program will list properly.